

ABSTRACT OF THE DISCLOSURE

[0052] A method of forming a light emitting diode includes forming a transparent substrate and a GaN buffer layer on the transparent substrate. An n-GaN layer is formed on the buffer layer. An active layer is formed on the n-GaN layer. A p-GaN layer is formed on the active layer. A p-electrode is formed on the p-GaN layer and an n-electrode is formed on the n-GaN layer. A reflective layer is formed on a second side of the transparent substrate. A scribe line is formed on the substrate for separating the diodes on the substrate. Also, a cladding layer of AlGaN is between the p-GaN layer and the active layer.

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